COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF ENERGY & ENVIRONMENTAL AFFAIRS
MASSDEPARTMENT OF ENVIRONMENTAL PROTECTION
Central Regional Office, 627 Main Street, Worcester, MA 01608

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IAN A. BOWLES
Secretary

LAURIE BURT
Commissioner

November 16, 2010

Ellen Weitzler, P.E.
Water Quality Standards Coordinator
US EPA Region 1
5 Post Office Square, Suite 100 (OEP06-2)
Boston, MA 02109-3912

RE: MA Surface Water Quality Standards– 2006 WQS triennial review

Dear Ms. ~~Weitzler~~ Ellen:

This is to follow up your meeting of November 2, 2010, with Marcia Sherman and Kimberly Groff, of MassDEP, regarding the MA Surface Water Quality Standards (WQS). During that meeting, the three of you discussed, among other things, MassDEP's desire to have EPA take no action on certain WQS revisions, which MASSDEP promulgated in 2006.

Three of the 2006 WQS revisions that EPA has not yet approved are: the revised definition of secondary contact recreation, which appears below and in 314 CMR 4.02 of the WQS; the reclassification and designation of a segment of the Palmer River, from the Shad Factory Pond dam to the state border, as Class SB shellfishing, which appears in Table 13 of the WQS (the Narragansett Bay/Mount Hope Bay Drainage Area); and the site-specific phosphorus criteria (which appear in Table 28 of the WQS). Subsequent to the last WQS revisions, which has been several years now, MassDEP has determined that it would no longer make sense for EPA to approve the revision to the secondary contact recreation definition, the designation of a segment of the Palmer River for the use of shellfishing, and the majority of the site-specific phosphorus criteria – i.e. those that were based on EPA eco region maps rather than site specific analyses. The revised definition of "secondary contact recreation" is:

> Secondary Contact Recreation - Any recreation or other water use in which contact with the water is either incidental or accidental. These include but are not limited to fishing, including human consumption of fish, boating and limited contact incident to shoreline activities. Where designated, secondary contact recreation also includes shellfishing, including human consumption of shellfish.

The new language is highlighted. We would like EPA to take no action on this revision because, since the last revisions (2006), as you are aware, we have identified some discrepancies and much needed clarification relative to how the use of shellfishing has been applied and interpreted. It seems that the revised definition of secondary contact recreation only serves to complicate as well as confuse an already complicated matter. Accordingly, in the next triennial review, we intend to clarify the applicability of the

use of shellfishing, along with the definition of secondary contact recreation. In light of this, we are of the view that it makes the most sense for EPA to take no action on the revised language.

Additionally, regarding a related revision, designation of a segment of the Palmer River for shellfishing, this revision, like the revision of the definition of secondary contact recreation, resulted from the confusion and lack of consistency among MassDEP's Clean Water Act programs as to how the use of shellfishing should be interpreted and applied. Further, it has become clear that MassDEP does not have the data to support such a designation for the Palmer River. During the next WQS revisions, therefore, MassDEP intends to propose to remove the shellfishing designation from the Palmer River segment. Finally, we view this designation as only contributing to the existing confusion on the shellfishing issue overall. As I am sure you recall, MassDEP recently discussed at length with you the complexities of the shellfishing issue in general and, in particular, in the context of the North Coastal waters and the SESD NPDES permit. For these reasons, we now request that EPA take no action on the Palmer River segment shellfishing designation, but still approve the SB reclassification.

Lastly, with respect to the site specific phosphorus criteria, we request that EPA take no action on the majority of those criteria. Regarding this issue, I have enclosed a separate document (Attachment 1), which sets out in detail our position and associated request.

Should you have any questions regarding this matter or need additional information, please do not hesitate to contact either Marcia Sherman at 617/556-1198 or Kimberly Groff at 508/767-2876. We look forward to continuing our work with you on the MA Surface Water Quality Standards.

Sincerely,

Rick

Dennis Dunn, Program Supervisor
Watershed Planning Program
Bureau of Resource Protection

Enclosure – Attachment 1 - Site specific Phosphorus Criteria for Lakes

cc: Marcia Sherman, MassDEP
Kimberly Groff, MassDEP
Mark Mattson, MassDEP
David DeLorenzo, MassDEP
Ann Lowery, MassDEP

Attachment 1 - Site specific Phosphorus Criteria for Lakes

As part of the last WQS triennial review in 2006, MassDEP adopted site-specific phosphorus criteria for numerous inland lakes and ponds. The majority of those site-specific phosphorus criteria primarily were based on TMDL thresholds derived from EPA eco region maps of typical lake phosphorus concentrations, rather than on site specific analyses. During the next triennial review, MassDEP intends to propose to rescind the site-specific phosphorus criteria that were not supported by site-specific analyses. In light of the above, MassDEP requests EPA to take no action on the site-specific phosphorus criteria that lack site-specific analyses. These criteria are delineated below. MassDEP intends to retain the site-specific criteria for a small number of lakes and ponds, which were based on site-specific analyses. Accordingly, MASSDEP requests EPA to approve those criteria, which are discussed below.

Site-specific phosphorus criteria are intended to protect waters from excessive algae and other nuisance plant growth and, along with implementation of associated TMDLs, will apply to restore and then maintain existing and designated uses. Nuisance algae growth, however, is not dependent solely on phosphorus concentrations. While phosphorus is most often the limiting nutrient, algal growth also can be affected by light availability in colored lakes. Algae biomass can be limited by hydrologic characteristics, such as the washout effect of water flowing rapidly through a system, which washes the biomass out of the system. Detailed information on these factors and on nutrient response variables, such as Secchi disk transparency and chlorophyll levels, as well as phosphorus concentrations, provide a more valid basis for developing site-specific phosphorus criteria than do the eco regions maps.

MassDEP used a detailed approach to establish the site-specific phosphorus criteria adopted for the following waters: Bare Hill Pond in Harvard, Lake Quinsigamond in Worcester and Shrewsbury, Flint Pond (North Basin in Shrewsbury and South Basin in Grafton, Shrewsbury and Worcester), Indian Lake and Salisbury Pond in Worcester and Leesville Pond in Worcester and Auburn, and Lake Boon in Hudson and Stow. While MassDEP, therefore, intends to retain the site-specific phosphorus criteria for these waters, in the next triennial review, MASSDEP intends to propose to clarify that the criteria for Flint Pond and Lake Quinsigamond are based on *available* phosphorus rather than *total* phosphorus.

The site-specific phosphorus criteria in the WQS that apply to other lakes and ponds reflect phosphorus target concentrations, based on eco-region maps of expected lake phosphorus concentrations. These targets did not take into account site-specific conditions and data on nutrient response variables, which would have provided a more reliable analysis. In light of this, in the next triennial review, MASSDEP intends to propose to rescind the eco- region based criteria. These include the criteria applicable to many lakes in the Blackstone River Basin as well as those for lakes in the Chicopee, Connecticut, French and Millers River Basins. While these waters would no longer be subject to site-specific phosphorus criteria, like all waters, they would remain subject to the narrative nutrient criteria in the WQS.

In moving forward, MassDEP intends to apply nutrient response variables related to nutrient enrichment and certain other relevant information to develop site-specific phosphorus criteria for freshwaters. MASSDEP is working on a nutrient criteria plan, to be submitted to EPA, which would set out nutrient response indicators, and other nutrient criteria development guidance, for MassDEP to use.

In the meantime, and for the reasons described above, MassDEP would like EPA to approve the following site specific phosphorus criteria, which MassDEP adopted during the last WQS triennial review:

BLACKSTONE RIVER BASIN

Flint Pond	Grafton, Worcester, Shrewsbury	Total Phosphorus 0.012 mg/L*
Indian Lake	Worcester	Total Phosphorus 0.027 mg/L
Lake Quinsigamond	Worcester, Shrewsbury	Total Phosphorus 0.012 mg/L*
Leesville Pond	Auburn, Worcester	Total Phosphorus 0.040 mg/L
Salisbury Pond	Worcester	Total Phosphorus 0.0455 mg/L

NASHUA RIVER BASIN

Bare Hill Pond	Harvard	Total Phosphorus 0.030 mg/L

SUASCO RIVER BASIN

Lake Boon	Hudson, Stow	Total Phosphorus 0.020 mg/L

* This should be "available" phosphorus, which MASSDEP intends to clarify in the next WQS triennial review.

MASSDEP requests that EPA take no action on the following eco region based criteria:

BLACKSTONE RIVER BASIN

Auburn Pond	Auburn	Total Phosphorus 0.025 mg/L
Brierly Pond	Millbury	Total Phosphorus 0.025 mg/L
Curtis Pond North	Worcester	Total Phosphorus 0.025 mg/L
Curtis Pond South	Worcester	Total Phosphorus 0.025 mg/L
Dorothy Pond	Millbury	Total Phosphorus 0.025 mg/L
Eddy Pond	Auburn	Total Phosphorus 0.015 mg/L
Green Hill Pond	Worcester	Total Phosphorus 0.025 mg/L
Howe Reservoir	Millbury	Total Phosphorus 0.025 mg/L
Jordan Pond	Shrewsbury	Total Phosphorus 0.025 mg/L
Mill Pond	Shrewsbury	Total Phosphorus 0.025 mg/L
Newton Pond	Shrewsbury	Total Phosphorus 0.025 mg/L
Pondville Pond	Auburn	Total Phosphorus 0.025 mg/L
Shirley Pond	Shrewsbury	Total Phosphorus 0.025 mg/L
Smiths Pond	Leicester	Total Phosphorus 0.020 mg/L
Southwick Pond	Leicester	Total Phosphorus 0.010 mg/L
Stoneville Pond	Auburn	Total Phosphorus 0.025 mg/L

CHICOPEE RIVER BASIN

Browning Pond	Oakham	Total Phosphorus 0.015 mg/L
Long Pond	Springfield	Total Phosphorus 0.030 mg/L
Minechoag Pond	Ludlow	Total Phosphorus 0.030 mg/L
Mona Lake	Springfield	Total Phosphorus 0.030 mg/L
Spectacle Pond	Wilbraham	Total Phosphorus 0.020 mg/L
Sugden Reservoir	Spencer	Total Phosphorus 0.015 mg/L
Wickaboag Pond	West Brookfield	Total Phosphorus 0.015 mg/L

CONNECTICUT RIVER BASIN

Aldrich Lake East	Granby	Total Phosphorus 0.030 mg/L
Aldrich Lake West	Granby	Total Phosphorus 0.030 mg/L
Lake Warner	Hadley	Total Phosphorus 0.030 mg/L
Lake Wyola	Shutesbury	Total Phosphorus 0.015 mg/L

Leverett Pond	Leverett	Total Phosphorus 0.015 mg/L
Loon Pond	Springfield	Total Phosphorus 0.030 mg/L

FRENCH RIVER BASIN

Buffumville Lake	Charlton	Total Phosphorus 0.015 mg/L
Cedar Meaow Pond	Leicester	Total Phosphorus 0.015 mg/L
Dresser Hill Pond	Charlton	Total Phosphorus 0.035 mg/L
Dutton Pond	Leicester	Total Phosphorus 0.025 mg/L
Gore Pond	Charlton, Dudley	Total Phosphorus 0.014 mg/L
Granite Reservoir	Charlton	Total Phosphorus 0.015 mg/L
Greenville Pond	Leicester	Total Phosphorus 0.025 mg/L
Hudson Pond	Oxford	Total Phosphorus 0.015 mg/L
Jones Pond	Charlton, Spencer	Total Phosphorus 0.015 mg/L
Larner Pond	Dudley	Total Phosphorus 0.014 mg/L
Lowes Pond	Oxford	Total Phosphorus 0.015 mg/L
McKinstry Pond	Oxford	Total Phosphorus 0.015 mg/L
New Pond	Dudley	Total Phosphorus 0.014 mg/L
Peter Pond	Dudley	Total Phosphorus 0.010 mg/L
Pikes Pond	Charlton	Total Phosphorus 0.015 mg/L
Robinson Pond	Oxford	Total Phosphorus 0.012 mg/L
Rochdale Pond	Leicester	Total Phosphorus 0.025 mg/L
Shepherd Pond	Dudley	Total Phosphorus 0.014 mg/L
Texas Pond	Oxford	Total Phosphorus 0.025 mg/L
Tobins (Mosquito) Pond	Dudley	Total Phosphorus 0.014 mg/L
Wallis Pond	Dudley	Total Phosphorus 0.014 mg/L

MILLERS RIVER BASIN

Beaver Flowage Pond	Royalston	Total Phosphorus 0.0125 mg/L
Bents Pond	Gardner	Total Phosphorus 0.015 mg/L
Bourne-Hadley Pond	Templeton	Total Phosphorus 0.015 mg/L
Brazell Pond	Templeton	Total Phosphorus 0.015 mg/L
Cowee Pond	Gardner	Total Phosphorus 0.0127 mg/L
Davenport Pond	Petersham, Athol	Total Phosphorus 0.0127 mg/L
MassDepot Pond	Templeton	Total Phosphorus 0.015 mg/L
Ellis Pond	Athol	Total Phosphorus 0.015 mg/L
Greenwood Pond	Templeton	Total Phosphorus 0.015 mg/L
Greenwood Pond	Westminster	Total Phosphorus 0.0139 mg/L
Hilchey Pond	Gardner	Total Phosphorus 0.019 mg/L
Lake Denison	Winchendon	Total Phosphorus 0.015 mg/L
Lake Monomonac	Winchendon	Total Phosphorus 0.0133 mg/L
Lower Naukeag Lake	Ashburnham	Total Phosphorus 0.0145 mg/L
Minott Pond	Westminster	Total Phosphorus 0.015 mg/L
Minott Pond South	Westminster	Total Phosphorus 0.011 mg/L
Parker Pond	Gardner	Total Phosphorus 0.015 mg/L
Ramsdall Pond	Gardner	Total Phosphorus 0.015 mg/L
Reservoir No. 1	Athol	Total Phosphorus 0.015 mg/L
Reservoir No. 2	Phillipston, Athol	Total Phosphorus 0.0051 mg/L
Riceville Pond	Petersham, Athol	Total Phosphorus 0.015 mg/L
South Athol Pond	Athol	Total Phosphorus 0.015 mg/L
Stoddard Pond	Winchendon	Total Phosphorus 0.015 mg/L

Wallace Pond	Ashburnham	Total Phosphorus 0.0137 mg/L
Ward Pond	Athol	Total Phosphorus 0.015 mg/L
MILLERS RIVER BASIN(continued)		
Whites Mill Pond	Winchendon	Total Phosphorus 0.015 mg/L
Whitney Pond	Winchendon	Total Phosphorus 0.015 mg/L
Wrights Reservoir	Gardner, Westminster	Total Phosphorus 0.0135 mg/L